

CHAPTER 4 RESOURCES

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ATTACHMENT 4-A
CHART OF INDIANA'S INTEGRATED TECHNOLOGY
DELIVERY SYSTEM (1995)

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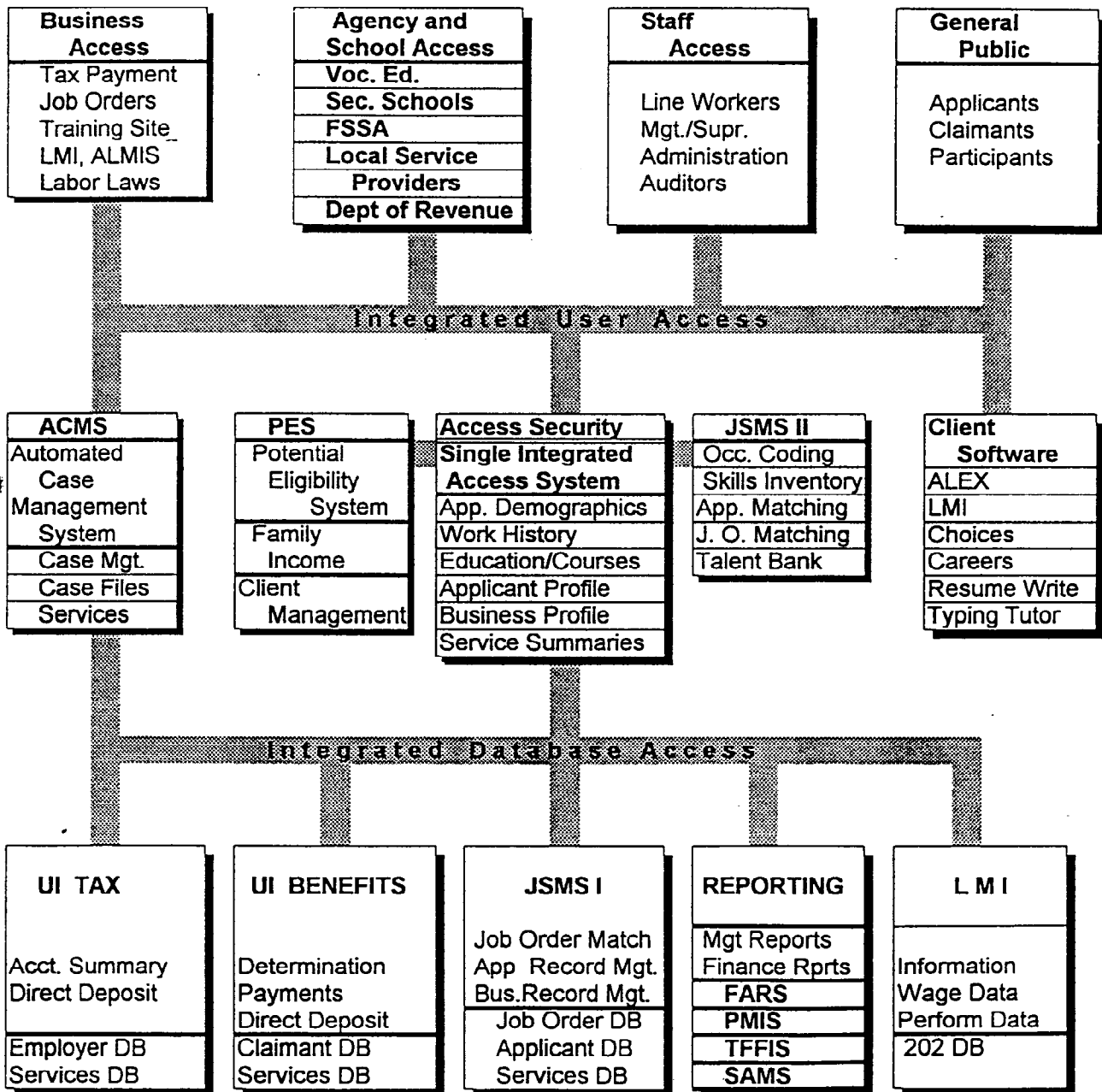
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DWD INTEGRATED DELIVERY SYSTEM

(DIRECT ACCESS, ON LINE FUNCTIONAL CAPABILITIES)

Revised: May 1995

ACCESS MODULES



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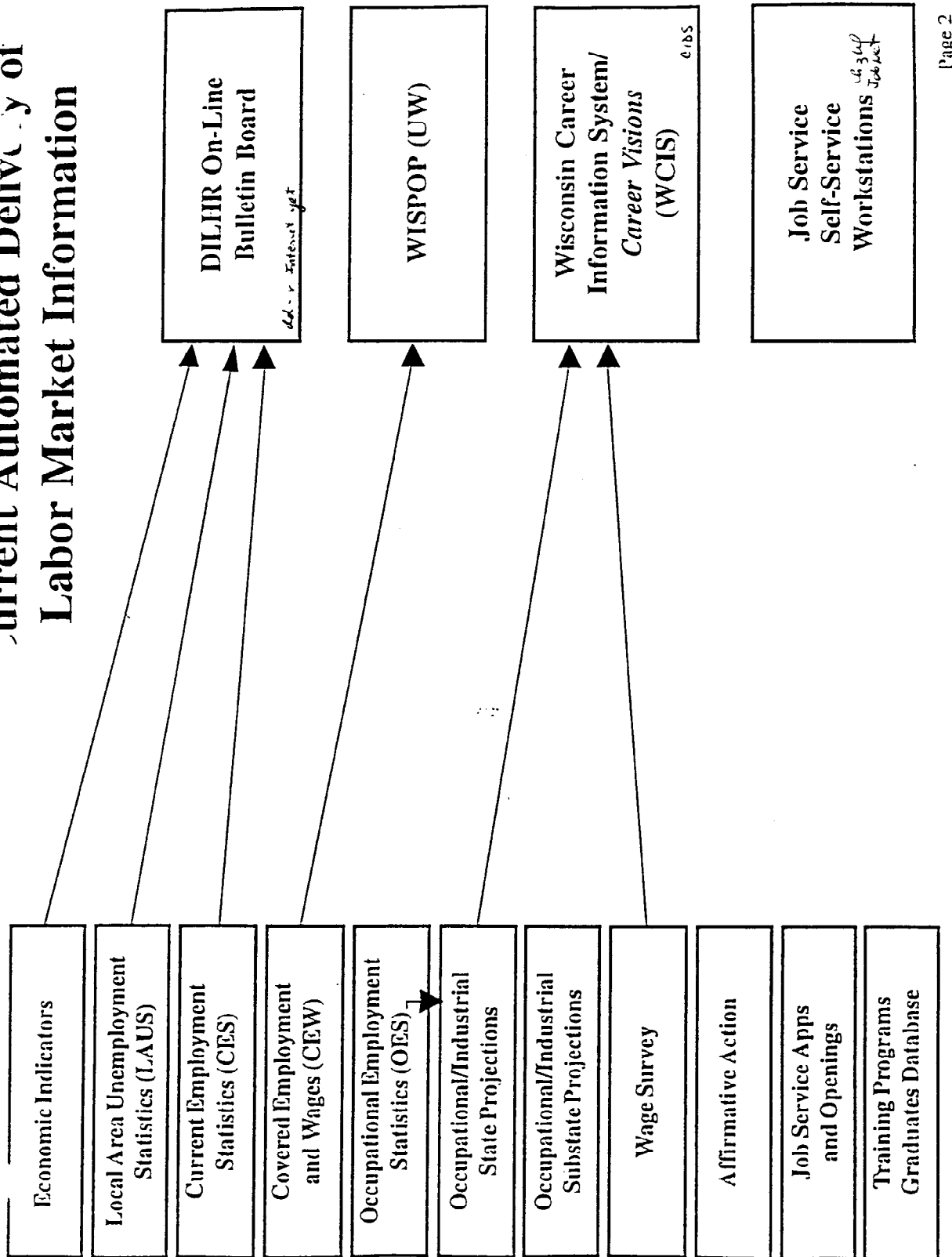
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ATTACHMENT 4-B
WISCONSIN'S PLANS TO IMPROVE DISSEMINATION
OF INFORMATION TO CUSTOMERS USING
INFORMATION TECHNOLOGY (1994)

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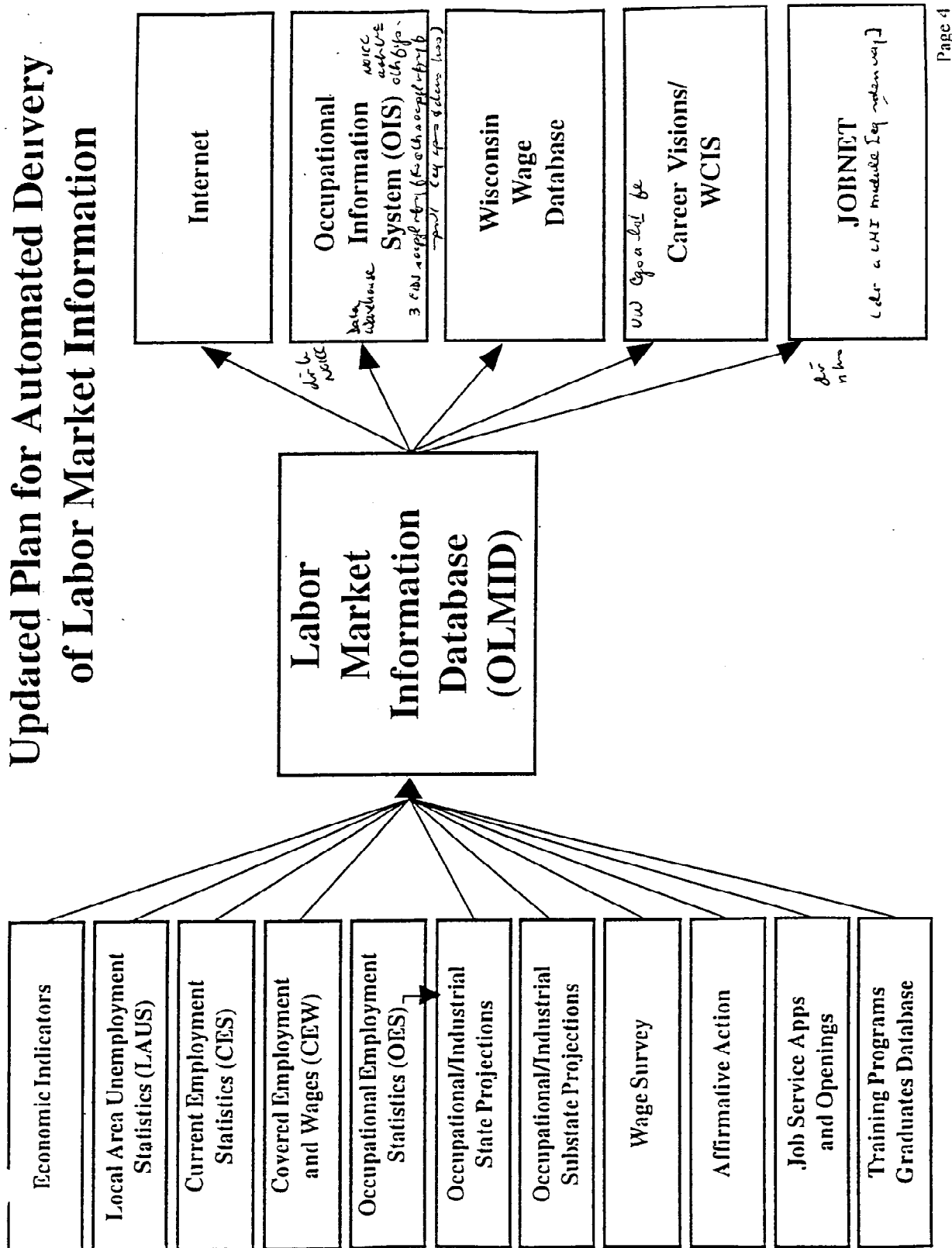
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Current Automated Delivery of Labor Market Information



del - r Internet .jet

Updated Plan for Automated Delivery of Labor Market Information



Bureau of Workforce Information Information Technology Initiatives

Following are descriptions of eight information technology initiatives currently underway in the Bureau of Workforce Information. The attached diagram illustrates the relationship among the initiatives.

I. Data Dissemination IT Initiatives

A. Occupational Labor Market Information Database (OLMID or OID)

The Bureau's vision for automating its labor market information (LMI) databases hinges on the successful development of a central data warehouse known as the Occupational Labor Market Information Database (OLMID). At least 10 distinct LMI data sets are anticipated to feed into this central data storage vehicle. Five information delivery systems will provide output for data users within and outside the Bureau. According to the Bureau's updated plan, these five delivery systems will be Internet, the Occupational Information System, the Wisconsin Wage Database, Career Visions/WCIS, and JobNet. Since the OLMID serves as an intermediary storage vehicle, the direct users of the OLMID will be limited to Bureau staff who supply the data inputs and those who design and maintain the five information delivery systems.

What's been done?

The OLMID is a database which incorporates selected elements from the following LMI data sets: (1) Covered Employment and Wages, also known as ES 202; (2) State Occupation/Industry Projections; (3) Wage Survey; (4) Job Service Applicants and Openings; (5) Training Programs & Graduates; (6) Industry/Occupation Staffing Patterns; and (7) Employer names and addresses.

Currently the OLMID feeds information into the Occupational Information System (OIS) only. This information delivery system will be discussed in greater detail below.

What needs to be done?

The OLMID database needs to incorporate several other LMI data sets before the vision for an automated data warehouse can be accomplished. The following LMI data sets are not currently incorporated in the OLMID: (1) Economic Indicators; (2) Local Area Unemployment Statistics; (3) Current Employment Statistics; (4) Occupational Employment Statistics; and (5) Affirmative Action. The current software will not accommodate the volume of data that needs to be added to the system. Migration of the database to the ORACLE software package has been recommended.

As envisioned, the OLMID database will feed information into several other information delivery systems besides OIS. These include Internet, a Wisconsin Wage Database, Career Visions/WCIS, and JobNet. Each of these information delivery systems will be discussed in greater detail below.

B. Occupational Information System (OIS)

The OIS is designed to meet the needs of planners and administrators of employment and training programs and educational institutions. The system will enable the user to identify labor shortages or surpluses in specified occupations through supply and demand data. The system will also include the ability to show relationships between occupations and educational preparation, and to compile labor market information from a variety of sources. Users may choose from two different search methods (direct or selective), get answers to frequently asked questions, and step through a self-guided career planning process.

What's been done?

The system is currently accessible to Bureau staff for beta testing. Programming bugs resulting in duplicate lines of data have been discovered, however. For instance, a query for the 10 fastest growing occupations in Wisconsin yields the following result -- Computer Engineers rank both first and second. Furthermore, although the occupational coding is identical for both entries, the information on expected annual openings is not.

What needs to be done?

The programming flaws mentioned above must be corrected. Programmers employed by the State of Utah are responsible for developing the software behind a fully functional OIS. Software is now scheduled to be delivered on September 30. Several weeks will be needed after delivery of the software to build and test data files, and to develop training materials. When the system is operational, the Bureau plans to conduct customer research to determine to what extent the OIS is actually meeting the needs of program planners and administrators.

C. *Career Visions* / Wisconsin Career Information System (WCIS)

Career Visions is a multimedia career exploration and information database produced by UW-Madison's Center on Education and Work (CEW). It is stored and distributed on CD-ROM, or it can be installed onto a hard drive from floppy disks. The product is available for either Macintosh or Windows platforms.

What's been done?

The product consists of three databases (750 occupations, 1500 colleges and universities, 800 programs of study) which are updated annually. The latest update is complete, and the product is ready for distribution to users in Wisconsin middle schools, high schools, the vocational and technical college system, the UW system, public libraries, and Job Service offices.

What needs to be done?

Since *Career Visions* is updated annually, revisions are always ongoing. The CEW staff is also working to eliminate programming bugs in the data retrieval software. The Macintosh version of the program offers three options, or modules, for conducting occupational searches, but the Windows version currently has only one search module. Work is underway to develop the other two search modules for the Windows platform.

D. Wisconsin Wage Database (UC/LMI Database)

The Wisconsin Wage Database contains the results of the biennial Wage Survey, in addition to other elements which are relevant to Unemployment Compensation adjudicators. The database has recently been converted from a mainframe application to the Microsoft Access database package for PCs.

What's been done?

Peter Westenberger, a DILHR programmer, has created a relational database incorporating data from the Wage Survey, Occupational Employment Statistics, and the Dictionary of Occupational Titles. The database is written as a Microsoft Access application.

What needs to be done?

The Wisconsin Wage Database has been prepared, but it has not been integrated with the OLMID. The OLMID presently contains a wage data file (OIDWAGE.DBF) derived from the Wisconsin

Wage Survey, but not the additional information on staffing patterns and occupational requirements which need to be considered in the adjudication of unemployment compensation cases. Wage Survey data in the OLMID are currently disseminated only through the OIS. Another data delivery system which will include all elements of the Wisconsin Wage Database needs to be developed.

The current version of OLMID is a FoxPro database application, and discussions to convert it to the ORACLE software package are ongoing. The Microsoft Access database developed by Peter Westenberger may not be compatible with these other software packages.

E. Labor Market Information on JobNet

JobNet provides job seekers with information on job openings submitted by employers to Job Service offices. Plans for the future call for making some labor market information available to job seekers through JobNet.

What's been done?

The Bureau has been soliciting input from job seekers on what types of labor market information, if any, they would like to see on JobNet. Job seekers participating in focus group discussions were presented with samples of various types of labor market information and asked for feedback. Participants were asked which specific LMI items they would like to see incorporated into JobNet and what formats -- tables, charts, graphs -- they preferred.

Through the month of September (and possibly longer), first-time users of JobNet are completing a survey indicating their preferences regarding labor market information which may be made available on JobNet. Users of the system are being asked to evaluate the usefulness of five data items: (1) wages by occupation; (2) local area unemployment rates; (3) projected openings by occupation; (4) names and addresses of employers, by industry, which hire for specific occupations; and (5) occupations requiring licensing and certification.

What needs to be done?

A report detailing the attitudes of focus group participants will be prepared by Sandi Scrivner and submitted by October 31. As noted above, the survey of first-time JobNet users will continue through the month of September. There is a possibility that the survey will remain on JobNet even longer. When data collection is completed, the responses will be tabulated and analyzed. The target date for adding an LMI component to JobNet is June 1996.

F. Labor Market Information on DILHR Bulletin Board and Internet

Selected labor market data sets are currently available through the DILHR On-Line Bulletin Board and DILHR's information sites on the Internet (both World Wide Web and Gopher). Labor market information is only one small component of the information provided through DILHR On-Line and the department's Internet sites.

What's been done?

The following LMI data sets can be viewed through DILHR On-Line and Internet:

- Wisconsin Leading Indicators
- Current Employment Statistics (CES)
- Local Area Unemployment Statistics (LAUS)
- Wisconsin Plant Closings and Mass Layoff Notices
- Wisconsin Labor Force Projections

The attachments, printed from DILHR's World Wide Web (WWW) and Gopher sites, list each data file currently available for printing or download through Internet.

What needs to be done?

The data sets currently accessible through the bulletin board and Internet are not being filtered through the intermediary database, OLMID. The processed files are posted directly to the bulletin board or Internet. It is not clear how the OLMID would change the current procedure or the look of the LMI data sets.

Marty Shannon of DILHR's Bureau of Information and Technology Systems (BITS) is the key resource person overseeing the department's bulletin board and Internet efforts. He may play a role in determining the future direction of this IT initiative.

Joe Tumpach and Janet Pugh conducted an extensive review of bulletin boards maintained by other states, and they agree that the introductory screens of DILHR On-Line ought to be made more user friendly. Users must step through several screens of information which is of little interest to general users before they reach the key menu choices.

II. Data Collection IT Initiatives

A. Optical Scanning in OES and CEW Programs

What's been done?

The OES Survey has begun to utilize optical scanning equipment to read selected parts of survey returns in an effort to eliminate some keypunching. At present only the labels on the first page are scanned. This information allows the OES staff to quickly track the response rate to their surveys.

The CEW program has been using optical scanning to track response rates for some time, at least one year. It is used in two programs: Multiple Worksite Report and the SIC Re-filing survey.

What needs to be done?

Tim Marquis would like eventually to scan the entire survey and eliminate data entry. He feels that the survey form (mandated by BLS) may need to be redesigned before this would be workable. There are no plans for the immediate future to implement scanning of the entire survey.

Linda Schultz would like to install an imaging system which can capture the entire paper document in an electronic format and permit multiple users to access the document and edit various data fields. She mentioned that Unemployment Compensation has an imaging system in place and that, ideally, her program could tap into this system. Imaging would vastly reduce the amount of paper handled in Linda's section. She would also like to institute a system in which survey forms or other reporting forms could be sent to the survey participants via Fax/modem and returned in a like manner. In other words, the survey form would exist only as an electronic file that is transmitted, completed, and returned by computer. This could totally eliminate paper in the data collection process.

B. Computer-Assisted Telephone Interviewing in CES Program

Early in the current decade the Bureau of Labor Statistics undertook a project to replace paper-and-pencil mail-out/mail-back surveys as the data collection method in the monthly Current

Employment Statistics (CES) program. John Henning indicated that the State of Wisconsin participated in the testing and evaluation for about 18 months.

What's been done?

Employers with 50 or more employees were contacted each month by telephone rather than by mail. Interviewers stepped through the questions in sequence, reading from prompts on a computer screen. Answers were recorded by typing the employer's responses into an electronic data entry form on screen.

The test was deemed a success and the system was subsequently refined into a Touch-tone Data Entry (TDE) system, in which employers phone in to a computer and give their information by pressing keys on the telephone touch-tone keypad in response to voice prompts. This system is quick, lessening the response burden on employers in the sample, and it eliminates paper forms.

What needs to be done?

At present only the larger employers in the sample are using TDE to respond to the CES survey. Eventually, John Henning would like to move all employers in the sample to TDE and completely eliminate paper-and-pencil survey instruments from the program.

The Bureau of Labor Statistics has proposed to move beyond TDE and use the Internet as a medium for disseminating and collecting the survey form. This collection method still must be thoroughly tested.

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ATTACHMENT 4-C
LIST OF TECHNOLOGY TOOLS AVAILABLE THROUGH
MINNESOTA'S WORKFORCE CENTER SYSTEM

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Technology Tools

America's Job Bank (AJB)

(<http://www.ajb.dni.us/>) AJB is the cumulative listing of job openings listed with Job Service nationwide and is accessible through the Internet.

America's Talent Bank

(<http://www.mesc.state.mi.us/netrex/almishome.html>) America's Talent Bank allows direct access to Minnesota's data base of job seekers through the Internet. It is currently being developed to complement and enhance the range of services currently provided. Employers query resumes using text and advanced skill group searches to select candidates for employment opportunities. In partnership with America's Job Bank, this site will enhance communication between employers and potential applicants.

Creative Job Search (CJS)

(http://www.des.state.mn.us/cjs/cjs_site/cjs-home.htm) CJS is a progressive curriculum that teaches the skills needed to conduct a successful job search.

Hiring Advisor

(<http://www.des.state.mn.us/hiring/advisor.htm>) Hiring Advisor is a searchable data base of topics related to hiring employees in Minnesota. This data base is cross-referenced to Minnesota statute when appropriate.

JOBNET

This pilot program will allow customers to register with Job Service as well as browse through current job opening by simply touching a computer screen.

MDES Internet Home Page

(<http://www.des.state.mn.us/>) This Internet home page is the virtual front door to the Minnesota Department of Economic Security, with links to information and countless services worldwide.

Minnesota Career and Education Planning System (MnCEPS)

This is a planned Internet system for education and employment knowledge to aid users in career exploration. It will link all information on educational offerings, training programs, occupations, skill requirements and job openings.

Minnesota Career Information System (MCIS)

(<http://www.educ.state.mn.us/mcis/mcishme.htm>) MCIS provides information on occupations, schools, programs of study and financial aid options in Minnesota.

Minnesota Future Work

(<http://scanners.tec.mn.us/~scanners>) This Website describes anticipated technological changes, job growth prospects and skills required to meet these challenges.



Technology Tools

Minnesota's Job Bank

(<http://www.des.state.mn.us/jobs/>) Similar to America's Job Bank, this site lists jobs that are currently listed through the Minnesota system. It also links the user with other employment-related sites.

Minnesota Regional Labor Market Information

(<http://www.fptoday.com/mnlmi>) This site provides regional and local information about demographics, wages, unemployment, industry trends and regional analysis projects, with links to Workforce Center, education and economic development services in each area.

Minnesota Research and Statistics Office Labor Market Information

(<http://www.des.state.mn.us/lmi>) This site contains detailed, up-to-date data on unemployment rates, wages and salaries, employment projections, other occupational and employment statistics and special research reports. It will soon house the *Minnesota Careers* and *Minnesota Economic Trends* publications.

Minnesota Workforce and Economic Information Systems (MnWEIS)

This is a stand-alone system developed to aid users in analyzing economic, demographic and labor market data for areas and regions in Minnesota.

PC Software Tools

A variety of software tools to assist job seekers and employers are available for use at workstations in the Workforce Center resource rooms. For example: word processing, tutorials, testing, resume builders, etc.

Public Point of Access to the Internet

PC's with Internet access are available in all Workforce Center resource rooms. These computers allow access to job listings, applicant listings, local employer home pages, as well as education and career information.

SkillsNet

(<http://www.des.state.mn.us/skillnet/skllsnt.htm>) SkillsNet is a skills-based matching system utilized by placement staff to match resumes with the skills requested by employers. Resumes are scanned into the SkillsNet and artificial intelligence is used to select candidates for referral to employers.

The Job Market: Minnesota's Virtual Workforce Center!

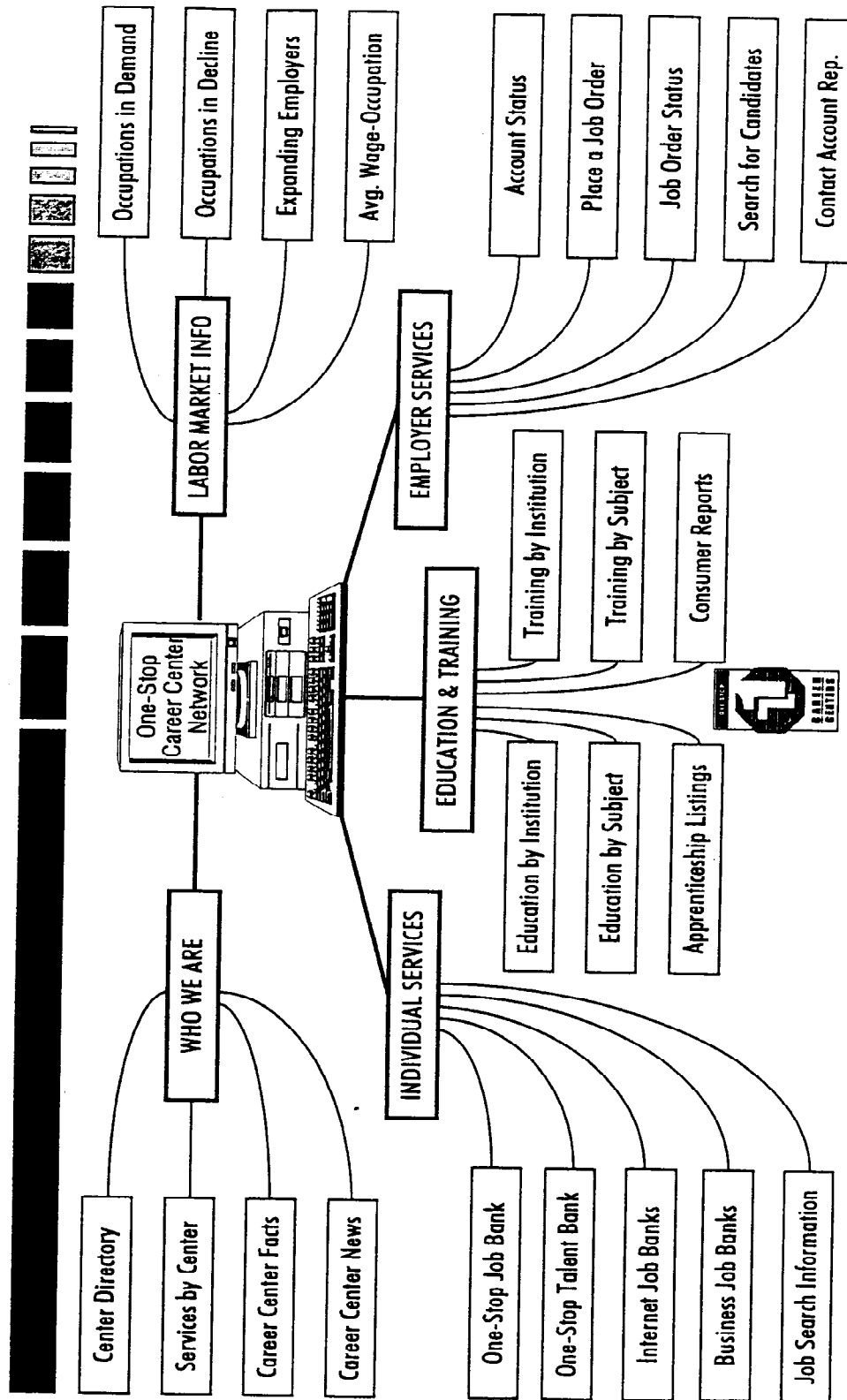
This system is under development. It will provide guided insight into the capabilities of the Workforce Center System and enable access to some services from remote locations.

ATTACHMENT 4-D
MASSACHUSETTS' CHART OF "INFORMATION
TECHNOLOGY THAT WORKS"

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Information Technology that Works



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ATTACHMENT 4-E
BROCHURE DESCRIBING CONNECTICUT'S PUBLIC
ACCESS LABOR INFORMATION SYSTEM

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PUBLIC ACCESS LABOR
INFORMATION SYSTEM BULLETIN
BOARD PHONE NUMBERS

Bridgeport Area	(203) 330-4831
Danbury Area	(203) 731-2814
Danielson Area	(860) 779-5854
Enfield Area	(860) 741-6127
Hamden Area	(203) 789-6954
Hartford Area	(860) 566-4240
Manchester Area	(860) 643-3604
Meriden Area	(203) 238-6011
Middletown Area	(860) 344-2481
New Britain Area	(860) 827-7995
New London Area	(860) 447-6221
Stamford Area	(203) 425-2446
Torrington Area	(860) 626-6233
Waterbury Area	(203) 596-4469
Wethersfield Area	(860) 566-4624

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**Connecticut
WORKS™**
OUR BUSINESS IS JOBS

A Partnership of the Department of Labor, the Nine Regional Workforce
Development Boards and Others to Provide Quality Workforce Development

**Public
Access
Labor
Information
System**

**PALIS, Your Electronic
Connection to Jobs and More**

WHAT'S ON THE PUBLIC ACCESS LABOR INFORMATION SYSTEM BULLETIN BOARD?

If You Are Unemployed . . .

- * Information on how to file an Unemployment Compensation Claim, including eligibility requirements
- * Unemployment law and regulations

If You Are Looking For Work . . .

- * Job Listings (CT and across the nation)
- * Information on Department of Labor employment assistance and training services
- * Job search assistance (résumé and interviewing tips and techniques)

If You Are An Employer . . .

- * Information on Business Services programs including recruitment, training, tax and financial incentives and downsizing support
- * A directory of Department of Labor Employment and Training services
- * UI Tax Information
- * Labor Market information
- * Wage and Workplace Standards

. . . and much more!

HOW DO I CONNECT TO THE PUBLIC ACCESS LABOR INFORMATION SYSTEM?

Using a personal computer (PC), a modem and communication software like Procomm Plus, Qmodem or Telix, you can connect to any of the boards. Select the phone number of the system closest to you for toll free access to the system. Each board has the same core information.

Communication Settings

Parity - None
Data Bits - 8
Stop Bits - 1

The Public Access Labor Information System's modem will connect from 1200 up to 14.4bps. If your modem speed is greater than 14.4bps, it will connect at 14.4bps.

WHAT DO I DO AFTER I HAVE LOGGED ONTO THE BOARD?

After you have connected to PALIS, enter:

Your First Name
Your Last Name
Your Calling Town and State

You will then be asked to enter a password. You create **your** own password. It must be at least three (3) characters but not more than eight (8). It is case sensitive, that is, **UPPER CASE** is considered different from lower case. If you enter your password in lower case, you must use lower case each time you access the system. **Remember this password.** You will need it each time you sign onto the system.

Once you have entered your name and password, PALIS will walk you through a series of questions designed to configure your PC to the system. Once that is done, you are in. Choose where you want to go by selecting items from the many menus.

ATTACHMENT 4-F
NEWSLETTER ARTICLE DESCRIBING FORMATION OF
WORK TEAM TO ADDRESS INTERNET ISSUES IN
MINNESOTA

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FOCUS ON FUNCTION



Team to address Internet issues

As the Minnesota Department of Economic Security (MDES) continues to be a government agency pioneer using the Information Superhighway, the Internet has been named the focus of a new horizontal function team (aka H-Team).

A committee working with the Internet from a nuts-and-bolts, operational level has met since last year. "We've had an excellent group that has been addressing the more technical levels of this rapidly emerging technology," Chief Information Officer Niemi said. "This group will continue to meet."

The purpose of the Internet H-Team will be to make policy decisions in this area, according to Niemi.

To use the analogy of a road as an example, the Internet operational committee had ideas from the outset on what and how to send "stuff" down the road. Yet, the road hadn't been built and there weren't very many rules for driving down the road. Speed limits, where on- and off-ramps are needed, and other rules for using MDES's new road will be set by the Internet H-Team.

POLICY ISSUES UNCOVERED

As the Internet operational committee has met, policy issues were uncovered. While decisions on these issues came from

Two teams join as one

Two Horizontal Function teams have been combined to form a single team.

The Communications and Marketing teams have officially combined to form the COMMA Horizontal Function team. The name comes from the first few letters of each former team.

"The missions of each team overlapped quite a bit and the team members were almost the same," says Bev Kontola, who will co-chair the meetings with Heidi Stennes.

Niemi, he felt there was a need to have a more broad-based group to make these decisions. Hence, the Internet H-Team will be formed. The membership of this horizontal function hasn't been determined yet, but it will include management and senior members representing all of the department's branches.

The naming of the Internet as a horizontal function also underscores the increased importance of this technology at MDES. While most people wouldn't have known what the World Wide Web was just a year ago, Niemi described MDES's presence on the Internet and the internal web as key strategies for the delivery of services to customers. The technology will become less exclusive as public libraries and other entities provide Internet access to people who don't have computers at home.

"The Internet is really the front door to the department in a virtual sense," Niemi said. The use of the Internet is becoming a key strategy in the development of the Minnesota Workforce Center System, which is the driving force behind the installation of the physical infrastructure throughout the state.

Here are the addresses of two department's "roads" to the Information Superhighway:

MDES Home Page

<http://mn.jobsearch.org>

MDES Internal Web

<http://intraweb.des.state.mn.us>

Murray Cody/CommTeam



WHERE IN THE (WEB) WORLD?

Some of the largest metropolitan newspapers in the nation have their employment ads listed at this address. Among them are the *Chicago Tribune*, *Los Angeles Times*, *Boston Globe*, *Philadelphia Inquirer* and the *Minneapolis Star Tribune*.

Registration is free so if you want to explore the job market in eight major cities (to be expanded in the future) check out this web site.



<http://careerpath.com>

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ATTACHMENT 4-G
ALMIS FACT SHEETS

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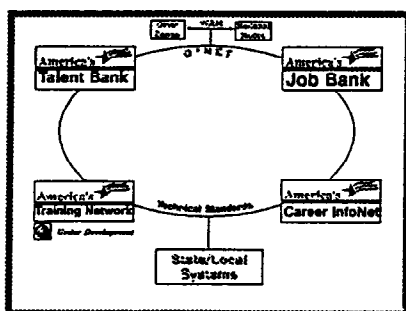


America's Labor Market Information System (ALMIS)

A common frustration among jobseekers and employers today is the difficulty in finding quality information on available employment and training programs. The One-Stop Career Center System is the organizing vehicle for transforming this fragmented array of employment and training programs into an integrated service delivery system for jobseekers and employers. This service delivery system is supported by an information delivery infrastructure that is the America's Labor Market Information System (ALMIS). ALMIS is playing an essential role in streamlining and integrating the maze of programs which seek to serve the employment and training needs of Americans.

ALMIS is developing, primarily through the efforts of consortia of states, an interactive infrastructure of national application systems, i.e., America's Job Bank (AJB), America's Talent Bank (ATB), America's

Training Network (ATN), and America's Career InfoNet (ACIN), that are logically connected by technical standards and a common language, i.e., O*NET coding. These national systems are being supported by various additional efforts undertaken by consortia leading to common state application development and standardized approaches to LMI.



A number of fact sheets have been developed to describe these ALMIS initiatives.

AVAILABLE ALMIS FACT SHEETS:

- | | | |
|---|---|---|
| 1. America's Job Bank
Rev. 9/15/97 | 6. O*NET
Rev. 6/19/97 | 10. Long-term Industry Projections
Rev. 6/19/97 |
| 2. America's Talent Bank
Rev. 6/17/97 | 7. ALMIS Employer Database
Rev. 7/2/97 | 11. Short-term Forecasts
Rev. 7/9/97 |
| 3. America's Training Network
Rev. 5/30/97 | 8. ALMIS Common Intake System
Rev. 6/16/97 | 12. Occupational Employment Statistics(OES)
Rev. 6/19/97 |
| 4. ALMIS DataBase System
Rev. 6/16/97 | 9. Media Library of Occupations
Rev. 6/19/97 | 13. ALMIS Consumer Reports System
Rev. 7/31/97 |
| 5. One-Stop Technical Standards
Rev. 7/10/97 | | |



For additional information, please contact the ALMIS Team at (202)219-8854.

Rev. 9/15/97



America's Job Bank

August 1997 was another record month for AJB with 30.6 million accesses!

America's Job Bank (AJB) is the largest electronic listing of job openings in the world. AJB was inaugurated on Veteran's Day in 1993 as an expansion to the Interstate Job Bank, which had been created in 1979. In February 1995, AJB first appeared on the Internet and began adding access to State job banks. The Internet service created a literal explosion of the job openings accessible through AJB.

The American public currently has access to about 750,000 job openings daily in AJB, including the affiliated State job bank collections. This number continues to grow as employers add over 500 jobs per day directly through the Internet and thousands more through local Employment Service offices. The daily job count is expected to rise to 1 million by the end of 1997.

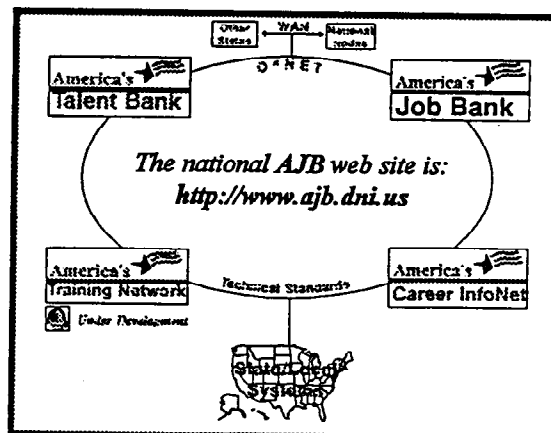
AJB has received numerous Internet awards including PC Magazine's Top 100 Web Sites, Magellan's Four Stars, and Point Communications Top 5% of Web Sites.

AJB continuously develops services in response to user requirements. As a value-added service to employers, AJB now permits mass entry of jobs through a public interface (batch loads of jobs directly from a company's personnel computer). AJB has

also developed improved search methods for job seekers and is developing new links to State job banks to permit quicker updates and allow each State's system to access all or part of the national collection, links to other job seeker and employer services, and special services for America's veterans. Because Internet access is not universally available to all Americans, an effort was recently launched by the America's Labor Market Information System Team of the U.S. Department of Labor to create thousands of Internet Access Zones for AJB in State Employment Security Agencies, community colleges, other educational institutions, public libraries, and community-based organizations.

Future products will include: a "job scout" to allow jobseekers to automatically receive job listings with specified criteria; "talking AJB" for the visually-impaired and those without access to PC's; direct access to career-related labor market information; career management tools; and links

to America's Talent Bank (ATB) that will allow employers to automatically receive ATB resumes that match their AJB job listings and that will allow jobseekers to automatically receive AJB job listings that match their ATB resume.



ALMIS
American Labor Market Information System

For additional information, please contact David Morman at (202)219-9092 or the ALMIS Team at (202)219-8854.

Rev. 9/15/97



America's Talent Bank

"The Talent Bank is a wonderful example of using information technology to provide an extremely useful and timely customer service." Vice President Al Gore, 4/7/97

America's Talent Bank (ATB) is a nationwide database of electronic resumes that can be searched electronically by employers. ATB provides direct access by employers to interested jobseekers and provides jobseekers unprecedented access into a broad job market. Sponsored by the America's Labor Market Information System (ALMIS), Employment and Training Administration, U.S. Department of Labor, ATB was developed by a consortium of 20 States, under the technical co-direction of Missouri and Michigan. After a significant pilot testing effort, ATB is continuing the roll-out of its production version to the last of the initial nine States. Following a test period of about 60 days, the national roll-out of ATB will begin.

The design and resources allow for every State to have an ATB server. All One-Stop implementation States have included a commitment to implement ATB as part of their overall system building effort and have been provided funds through their One-Stop implementation grant. Other States who are ready to install ATB can do so through funds available in the ATB grant. In addition, a State may vary its system implementation plans to meet its own scheduling requirements while still having a product

for staff and customers by using the "ATB alternate server," hosted by the ATB consortium.

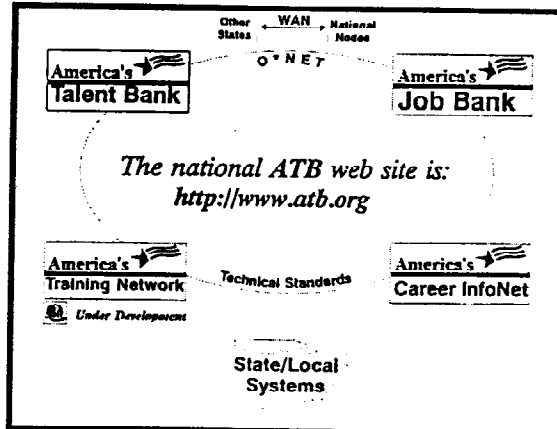
In addition to individual State ATB servers and the ATB alternate server, there will also be a National ATB server. Resumes of jobseekers willing to work in more than one State will be found on this National server.

State Technical Considerations

Both Windows NT and UNIX versions are being developed and States may use either version. Firewall-1 has been tested and works effectively for this application. The specific technical environments supported for this product are:

- SUN SPARCsystem w/ Solaris 2.6
- or
- Mid-level server w/ Windows NT
- Oracle v. 7.x
- Inquiry search engine
- TCP/IP

Future products will include: a "talent scout" to allow employers to automatically receive resumes with specified qualifications; embedded and free form LMI/O*NET; a "take home" resume writer; a Talent Bank/UI Internet application; and direct links to America's Job Bank (AJB).



For additional information, please contact the ALMIS Team at (202)219-8854.

Rev. 6/17/97



America's Training Network

America's Training Network (ATN) is a new effort just beginning development and sponsored by the America's Labor Market Information System (ALMIS) of the Employment and Training Administration, U.S. Department of Labor. It is attempting to create a marketplace where individuals and companies can readily find appropriate, already developed training (technology-based, distance learning, traditional courses, or custom-developed). Such a marketplace will make it easier for training vendors to reach their intended audience and for small training firms to find a larger market. The result of an organized, accessible market should be lower overall costs for training and a greater willingness on the part of both employers and individuals to invest in the training necessary to raise the skill level of the American workforce and help the United States become more competitive in the global economy of the 21st century.

The ATN will consist of three primary components:

- a browser-enabled user interface
- a set of interconnected content databases
- an undergirding application layer, structured around an expert system (based on the

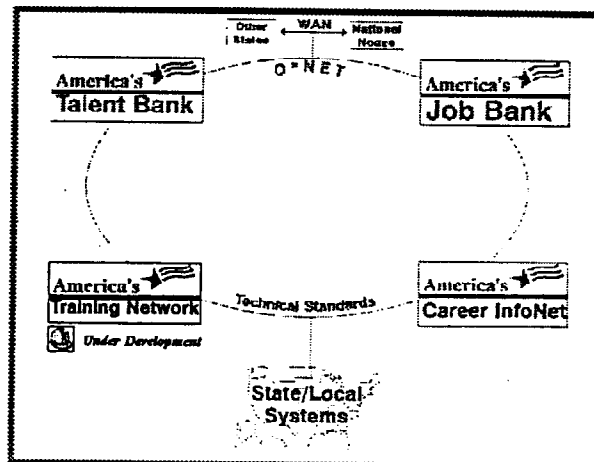
"intelligent Tutor" model developed by the Department of Defense) and a sophisticated search engine, that accesses, manages, and keeps track of the use of the databases.

The User Interface will provide a ubiquitous, easy-to-use graphical access, at the server level, to the ATN's applications and databases.

The Database Layer will consist of a set of interconnected content databases, including: the *Institutions Database* of all the public and private post-secondary course offerings; the *Training Products Database* of the various non-traditional self-contained training programs; the *Accreditation, Certification, and Licenses Database*, the *Training Modules Database* containing the electronic building blocks used in computer-based courseware development; the *Vendor Database* of training developers and providers; the *Consumer Information Database*

of information on outcomes, cost, and performance information.

The Applications Layer will provide the ATN user with intelligent help in defining training needs, establishing learning goals, and assisting users in navigating training choices.



For additional information, please contact David A. Morman at (202)219-9092 or the ALMIS Team at (202)219-8854.

Rev. 5/30/97



ALMIS DataBase System

The America's Labor Market Information System (ALMIS) DataBase (*ALMIS DB*) is a centralized database that has been developed for the maintenance of labor market and occupational information. It is available to the States and must be packaged with any of a number of internet and client/server applications, currently under development, or a State-customized application.

The *ALMIS DB* is intended to serve the occupational information needs of the country, and currently includes: projected employment; wage information; training information; employer information; population and demographic data; economic indicators; and area cost of living profiles.

OIS c/s is a product currently associated with OLMID c/s, the precursor to *ALMIS DB*. It will be rewritten for the new database structure and one of the applications available for use with *ALMIS DB*. It will be a windows-based application that queries data from the *ALMIS DB* and allows the user to search by categories, such as, occupation, industry, or training programs. Users will also be able to select from a list of frequently asked questions to obtain occupational information.

ALMIS DB and *OIS c/s* were developed by the America's Labor

Market Information (ALMIS) Team, with technical assistance from the National Occupational Information Coordinating Committee (NOICC) and the state of North Carolina. These products are enhanced, client-server versions of products originally developed by NOICC.

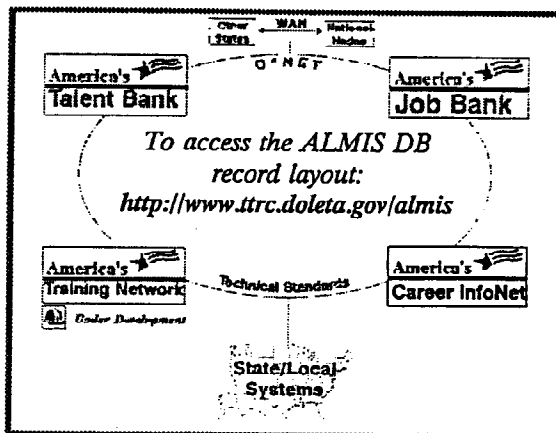
State Technical Considerations

The supported environment for *ALMIS DB* is:

- SUN SPARCsystem w/ Solaris 2.x
or
Mid-level server w/ Windows NT
- Oracle v. 7.x
- Oracle SQL*NET
- TCP/IP

Future products will include the development of America's Career InfoNet, which will build on the foundation of the *ALMIS DB*. This will be an ALMIS service made available through the Internet and integrated with America's Job Bank (AJB), America's Talent Bank (ATB), and other core systems so that all users,

including both jobseekers and employers, will be able to obtain information about occupations, employment conditions, etc. There will also be an embedded Career Resource Library with links to other relevant web sites.



For additional information, please contact Dr. George Richard at (202)219-5600 or Jean A. O'Donoghue at (202)219-8854, of the ALMIS Team.

Rev. 6/16/97



One-Stop Technical Standards

Voluntary One-Stop technical standards have been developed by a committee of State and Federal representatives, as well as representatives from ICESA (Interstate Conference of Employment Security Agencies) and NOICC (National Occupational Information Coordinating Committee). The mission of the One-Stop Technical Standards Committee is to develop and disseminate voluntary technical standards and guidelines for application development within the One-Stop environment, with the intent to maximize the use of technology budgets at the Federal and State level, by encouraging the sharing of common applications and creating a market for application developers, both public and private, to design systems that can be used by multiple states.

This activity is in support of and focused on new, nationally developed information systems, that can be used by multiple states. These technical standards and guidelines have been developed to encourage the efficiencies of sharing and national linkages of information systems by public and private groups.

The goal of the One-Stop Technical Standards Committee is to establish standards and guidelines that will

enable states to develop information systems that talk to each other, enable expanded user access, and improve customer service in the One-Stop Center System.

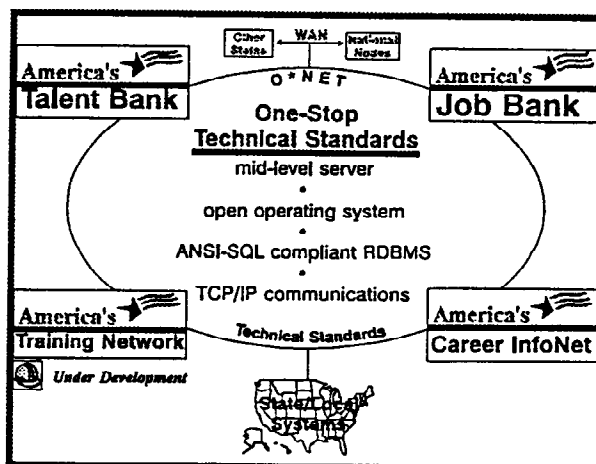
Specific technical environments supporting the major One-Stop/ALMIS electronic systems at the State level are the following:

America's Job Bank: SUN SPARCsystem with Solaris 2.x operating system or a mid-level server with Windows NT, running Oracle v. 7.x, and using TCP/IP.

America's Talent Bank: SUN SPARCsystem with Solaris 2.6 operating system or mid-level server with Windows NT, running Oracle v. 7.x and Inquiry search engine, and using TCP/IP.

ALMIS Database: SUN SPARCsystem with Solaris 2.x operating system or a mid-level server with Windows NT, running Oracle v. 7.x with Oracle SQL*NET, and using TCP/IP.

America's Training Network: *Under construction.* Will be developed in an open system environment, compliant with technical standards, and compatible with major systems.



ALMIS
American Labor Market Information System

For additional information, please contact Jean A. O'Donoghue of the ALMIS Team at (202)219-8854.

Rev. 7/10/97



O*NET

O*NET, the Occupational Information Network, is a comprehensive database system for collecting, organizing, describing and disseminating data on job characteristics and worker attributes.



O*NET will replace the outmoded Dictionary of Occupational Titles (DOT), currently the nation's primary source of occupational information. Offering more than merely updated data, **O*NET** provides a new conceptual framework that reflects the advanced technologies, adaptable workplace structures and wide-ranging skills required by today's changing workplace.

O*NET can help all Americans make informed employment decisions. **O*NET's** usefulness will expand as its data become increasingly accessible to the public.

The **O*NET** database identifies, defines, describes and classifies occupations. **O*NET** provides users with the following types of occupational information (see box).

O*NET classifies data into these domains, giving you six "windows" to look in to all aspects of the workplace.

O*NET DATABASE: A FOUNDATION TO BUILD ON

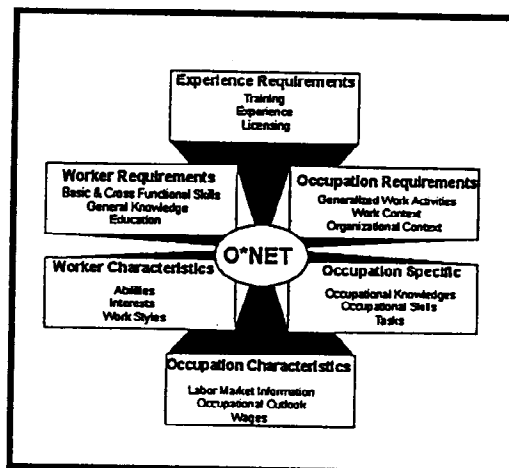
No one effort, public or private, can capture all aspects or target all the dimensions involved in

the changing workplace. Government's participation helps insure objectivity and fairness in data collection, but government alone cannot build the extensive occupational information network today's economy demands.

The **O*NET** database will serve as the publicly funded hub of a vast network of developers, agencies and organizations working with a common goal: create materials that enhance the employment potential of all Americans. For example, developers could enhance the **O*NET** database "core" to

- ⇒ Create skills-match profiles
- ⇒ Open new approaches to career counseling
- ⇒ Develop resumes, job orders, and descriptions of personnel positions.
- ⇒ Align educational and job training curricula with current workplace needs

- ⇒ Fine-tune assessments to fully evaluate skills and requirements
- ⇒ Restructure staff and organizational development
- ⇒ Explore career options that capitalize on prior experience
- ⇒ Reduce recruitment costs of workers
- ⇒ Benchmark performance appraisals



For additional information, please contact the O*NET Team at (202)219-7161, or via e-mail at O*NET@doleta.gov, or contact the ALMIS Team at (202)219-8854.

Rev. 6/19/97



ALMIS Employer Database

One of the most vital needs of a jobseeker is information about employers: who they are, where they are, how can they be contacted? This information has been collected by State Employment Security Agencies (SESAs), but generally was not available to jobseekers due to confidentiality restrictions. That is -- until now.

The *America's Labor Market Information System (ALMIS) Employer Database* is an acquired database containing information about over ten million employers throughout the country. Jobseekers, career counselors, and other intermediaries will have direct access to information about these employers. The *ALMIS Employer Database* is being purchased by the U.S. Department of Labor, Employment and Training Administration, as part of their strategy for creating a comprehensive ALMIS DataBase (*ALMIS DB*) that will support user applications under America's Career InfoNet.

The *ALMIS Employer Database* is expected to be available to states in September. There will be several levels of access to the data: primary recipient, intermediate user, and client. The primary recipient, usually the SESA, will be able to either download the entire database to a PC (along with a proprietary search engine, if they so choose), or search

the database using the CD directly. The intermediate user, a local One-Stop or other service deliverer, will be able to search the entire database and retrieve up to 2,500 records at one time. The client, e.g., a jobseeker, will be able to search the entire database and retrieve up to 100 records.

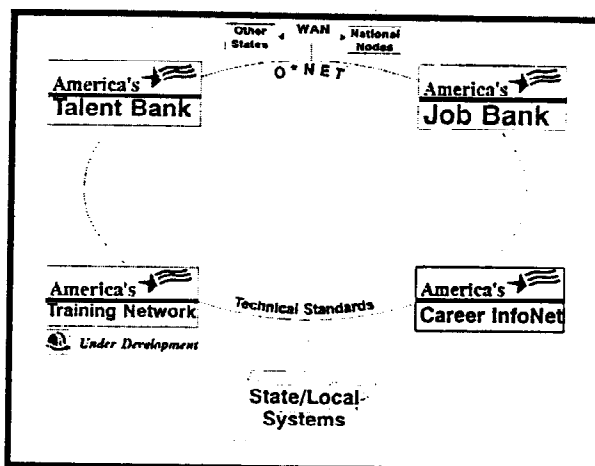
The *ALMIS Employer Database* contains over 40 data elements including:

- Employer Name
- Physical Address
- Mailing Address
- Industry
- Telephone Number
- FAX Number
- Contact Person
- Employment
- Ownership Code
- Internet Address

If a state chooses to use the included search application, a number of fields can be searched, including name, SIC, city, state, zip code, phone number, or employment size.

Each state, after signing a usage agreement with the vendor, will receive two complete sets of

the database on CDs. Maine, as the lead state in the *ALMIS Employer Database Consortium*, will coordinate the delivery of the database to the states. States may also purchase additional copies of the database directly from the vendor.



For additional information, please contact Ray Fongemie at (207)287-2271 or Vicky Galifaro of the ALMIS Team at (202)219-8854.

Rev. 7/2/97





Media Library of Occupations

An America's Labor Market Information System (ALMIS) consortium has been funded, with New Jersey as the lead state, to begin a project that will enhance the One-Stop system building effort nationwide. It incorporates the use of the Internet and other technology-based delivery of One-Stop unassisted services, and accelerated introduction of products and services. Specifically, the project is to begin development of a library of motion video, still video, and other multi-media occupational information segments, pilot these in a New Jersey One-Stop site, and make them available to all States.

The consortium of States have collaborated to choose the initial 100 occupations which will be represented in motion video, still video, and other media formats. States drew from their demand occupation lists in this process, as well as the BLS national high demand lists. Most of the selections come from the BLS lists of fastest growing occupations and largest occupations. Each consortium State also has been given a free choice of five additional occupations. Scripts are being written describing the multi-media content for each occupation. Once the consortium reviews and approves the script content, the next step will be media

production. Following the first set of twenty completed videos, focus groups will review the films to provide feedback as to the usefulness of the product and any constructive changes in format or production. This information will be used to see if we are on target with this effort and to modify the process, if necessary. Motion video segments will be compressed into the MPEG-1 format and stored on CD-ROM. The consortium will approve the produced media. Copies of the CD-ROM will be provided initially to all consortium states and then be made available to all interested States.

An initial decision was made that the target audience of the occupational videos would be adults. A second audio track may be available for these videos, so alternate voice-overs could be made in the future to focus on school-age youth or another target audience, using the same video portion. The majority of these videos will be 90 seconds long, with some of shorter duration. Real people will be filmed in

their work settings with a voice-over written by script writers and read by actors.

The first six videos were ready in May, 1997. All of the initial 100 videos will be completed by December, 1997.

TECHNOLOGY CONSIDERATIONS

For the New Jersey pilot, the motion video will be compressed into the MPEG-1 format and stored on CD-ROM. The contents of the CD-ROM will be installed onto an Oracle Video Server and delivered across a LAN to 15 public access client workstations at the New Brunswick, NJ (Middlesex County) One-Stop Site. These segments can be incorporated into any type of multi-media application in any State, according to the technology requirements in each State, or may be streamed over the Internet, dependent on speed considerations.



For additional information, please contact Connie O. Hughes, New Jersey project director, at (609)633-0491 or Jean A. O'Donoghue of the National ALMIS Team at (202)219-8854.

Rev. 6/19/97



Long-term Industry Projections

The main goal of the long-term Industry Projections and Census Tools Consortium is to provide methods and tools to improve the development and delivery of industry/occupational employment projections for State research and analysis units. To accomplish this objective Consortium members have undertaken several research projects.

One of the major projects was to develop a tool for analysts to produce industry projections that can be used as input for the MicroMatrix occupational projections system. The long-term Projection System (*LTP*) provides the analyst with a wide variety of tools to investigate industry employment characteristics and behavior. Analysts can make pre-projection decisions by developing location quotients, time series, growth rate analysis, and review the national, state, and local industry mix. Industry employment projections can be accomplished by using any one or several of the methods offered by the system. Researchers can build models using shift share analysis, time series, or predefined and customized regression techniques. Once the models are selected for each industry they are saved and used to build an Industry Control Totals (*ICT*) file used as input for the MicroMatrix System.

The *LTP* System has been provided to each State R&A unit. In most States the system will be used to develop industry projections

in preparation for the next round of industry/occupational projections that will begin this fall. A Pentium Processor with 16 MB of RAM is the desirable personal computer configuration. However, the system will run on a 486 machine with 8 MB of RAM.

On-going Consortium research focuses on the use of tools and techniques that analysts use to develop or review data. Research continues on the use of the Occupational Area Specific Information System (*OASIS*). This project is looking at the validity of using *OASIS* to estimate sub-state occupational staffing patterns. Replacement rates and change factors used in the development of occupational projections are also being reviewed. Another project provides access to State projections on the Internet. This information can be found at <http://udesc.state.ut.us/almis/stateproj/>

Future research will look at additional uses of the Internet for the delivery of industry/occupation projections information. Researchers are also reviewing areas of concern in the new OES/Wage program. Other research includes looking at labor supply, providing

projection guidelines for States, and providing a projections reference manual. The Consortium will continue to develop enhancements for the *LTP* System and provide technical support and training for State analysts.

LONG-TERM PROJECTIONS CONSORTIUM

- Industry Projections System for State Analysts
- Occupational projections research
- Internet access of State and National Industry/Occupational Information
- Sub-State Occupational staffing patterns
- Technical Support and Training of State Analysts



For additional information, please contact Bob Murdoch at (702)687-4550 or Vicky Galifaro of the ALMIS Team at (202)219-8854.

Rev. 6/19/97



Short-Term Forecasts

An America's Labor Market Information System (ALMIS) consortium was funded, with Illinois as the lead state, to develop an automated system which would allow state employment security agency analysts to produce *quarterly* statewide industry forecasts and *annual two-year* statewide occupational forecasts.

The goal is to enable service providers to be able to present key labor market facts so that dislocated workers, new entrants -- in fact, all types of job seekers looking for quick entry into the labor market -- may make informed job choices.

The consortium membership reflects private- and public-sector involvement in creating a hybrid data processing system which will produce timely and comparable forecasts, *i.e.*, timely by gauging the turning points in the economy and comparable across states.

To date, the industry forecasting component of the system is complete; five week-long training seminars have been conducted (attended by 82 analysts from 46 states, Washington, D.C., and Puerto Rico); and software for industry forecasting has been distributed to state employment security agencies.

Areas of activity during the first-year of the project included: data sources, system

design, system development, and occupational hiring research.

Second-year activities encompassed capacity building, enhancements to statewide forecasting software, Internet (home page and electronic accountability), metropolitan area forecasting, research on occupational forecasting, and user products.

During the next year, activities will focus on:

- A beta test of forecasting software for industry employment in metropolitan areas
- Development of an occupational forecasting component
- Integration of economic information to facilitate a national job search of local labor markets
- Projections WEB site
- Presentation of labor market information

State Technical Considerations

Minimum technical requirements to use the software: 66MHz 486 with 16MB RAM running Windows 3.1 or better, 3.5" Floppy or CD-ROM Drive, Mouse, and VGA monitor.

The final version of software will incorporate user-friendly options, analytical tools, and a flexible response to diverse state needs.

SHORT-TERM FORECAST PRODUCTS

- Two-year forecasts (annual updates) of private sector employment in over 700 occupations
- Quarterly forecasts extending to two years (quarterly updates) of private-sector employment in 65 industries



ALMIS

For additional information, please contact Henry Jackson at (312)793-2316 or Vicky Galifaro of the ALMIS Team at (202)219-8854.

Rev. 7/9/97



Occupational Employment Statistics (OES)

One of most frequently requested products from the LMI offices is accurate, local wage data. *Uniform* wage data by occupation at the *local* labor market level is a major gap in our current LMI system. State and local governments conduct most surveys; they use multiple definitions of both occupations and wages. The timing of the surveys varies from state-to-state and is hard to compare. The **Occupational Employment Statistics (OES)** survey expanded its collection to include wages from all states in 1996 to address this need.

With the expanded **OES**, the country will have a standardized wage survey which will allow comparability across state borders in a mix of occupations that will cover virtually the entire economy. The **OES** will now produce a valid "mean" and a median earning for over 800 occupations in over 500 sub-state areas.

The expansion of the **OES** survey, which became operational in 1971, to every state as well as to every Metropolitan Statistical Area (MSA) and to many sub-state areas would eliminate the need for the Alien Labor Certification (ALC) program's ad hoc surveys and reduce the respondent burden by employers.

Watershed benefits to the national and state occupation projection programs will also be substantial since these programs use the **OES** program statistics for their raw data.

In the absence of the **OES**, a standardized, cost-effective, periodic, national wage survey would have to be designed that would meet the needs for local wage data and be comparable between areas. Until this expansion is realized, quality and timeliness of wage data is inconsistent.

The **OES** survey is conducted in cooperation with the Employment Training Administration (ETA) and the State employment security agencies (SESAs) and is now designed to obtain national, State, and area occupational estimates for all States. ETA and the Bureau of Labor Statistics (BLS) fund the program.

OES Survey

- First truly national wage survey.
- Provides detailed occupational and industry information on employment and wages.
- Covers over 800 occupations in more than 500 sub-state areas.
- Eliminates the need for other state wage surveys.
- First data available in fall of 1997.

BLS provides the procedures and technical assistance for the survey, with input from ETA's ALC and the ALMIS team; SESAs do the actual collection of the data.

The expanded **OES** survey, which went to the field in the fall of 1996, will yield its first results in late 1997.



For additional information, please contact Jim Conley of the ALMIS Team at (202)219-8854.

Rev. 6/19/97



ALMIS Consumer Report System

The ALMIS Consumer Report System (CRS) is a set of integrated products & services to facilitate "Informed Choice" by providing historical performance, service, and contribution information of One-Stop and employment, training, & education programs to:

Student & workforce development program participants as an additional new tool in their 1) career decision-making and 2) selection of education & training alternatives;

State workforce development & One-Stop Career Center administrators to help guide their development and continuous review of 1) policies & strategies and 2) referrals & procurement decisions; and

The private sector & general public to help improve 1) the match between the training supply and the demand for high skill/high wage occupational employment and 2) investment decisions.

The CRS Consortium is led by Texas and the other Round I One-Stop Implementation States (Massachusetts, Maryland, Connecticut, Iowa, & Wisconsin).

Other partners include: all other One-Stop States; secondary & higher education; and academicians conducting research on education/training provider performance, career information delivery, and/or customer satisfaction ratings of publicly funded workforce development programs.

<http://www.soicc.capnet.state.tx.us/crs/>

The system's primary components are:

- ✓ A Field Guide for State implementation of automated UI wage record follow-up and reporting of program exitors
- ✓ A Standard Database and Structure to hold and organize education, Employment, and training service provider performance history information (whether obtained by automated or traditional techniques)
- ✓ A Graphical User Interface (GUI)
- ✓ A Report Generator to display the "real world" outcomes-based results of One-Stop and other employment/training/education program exitors in three forms:
 1. Text (primarily for counselors)
 2. Tabular (primarily for program planners & administrators)
 3. Graphs (primarily for students)
- ✓ Built-in Utilities for monitoring both usage & action steps taken by end users
- ✓ Reference Manuals / Technical Assistance

Beta 2 Development includes a more customer friendly, web-like user-interface; more data choices; data disaggregation by exitor status; and easier to read results.

"Year 2" Activity: The principal emphasis will be on the conversion of the CRS to an Oracle / UNIX environment to be mounted on the Internet next to America's Job Bank. Also an additional link to the BLS Occupational Outlook Handbook is now planned.



For additional information, please contact Marc Anderberg, the Consortium Technical Director, at (512) 502-3772, or David S. Lipnicky of the ALMIS Team at (214) 767-4966.

Rev. 7/31/97